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AMSAT NEWS SERVICE
ANS-071

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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ANS-071 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 071.01
>From AMSAT HQ SILVER SPRING, MD.
March 11, 2012
To All RADIO AMATEURS
BID: $ANS-071.01

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
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Howard Long, G6LVB featured speaker at the 2012 AMSAT/TAPR Banquet

TAMSAT/TAPR Banquet on Friday night, May 18 is one of the main AMSAT activities during the 2012 Hamvention at Dayton.

AMSAT is pleased to announce that Howard Long, G6LVB will be the featured speaker for the evening event. Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can

be used with the FUNcube Dongle.

Banquet tickets will not be sold at the AMSAT booth during the Hamvention so reservations must be made through the AMSAT Store:
http://www.amsat-na.com/store/item.php?id0158
Tickets are $30 apiece.

[ANS thanks Gould Smith, WA4SXM for the above information]

AMSAT-NA Receives US Space Command Authorization for Keps Distribution

AMSAT's Keeper of the Keps, Ray Hoad, WA5QGD wrote, "I am pleased to announce that AMSAT's request to re-distribute AFSPC Keplerian elements from SpaceTrack has been approved for the period April 1, 2012 to April 1, 2013. Our USSTRATCOM ODR (Orbital Data Request) to distribute the KEPs was approved on March 1, 2012. We are "good to go" for another year."

Thanks to the US Air Force Space Command, Perry Klein, W3PK and Paul Williamson, KB5MU for their help in this process.

[ANS thanks Ray Hoad, WA5QGD for the above information]

AMSAT-UK Announces Colloquium 2012 & Issues First Call for Speakers

The AMSAT-UK International Space Colloquium will be held on September 14-16, 2012.

The colloquium attracts an international audience from across Europe as well as North America and the Middle East. Attendees range from the builders of the CubeSats and Nanosats, those who communicate through them and beginners who wish to find out more about this fascinating branch of the hobby.

It provides a rare opportunity to chat with satellite designers and builders, discussions frequently continue until the early hours of the morning.

A Gala dinner is held on the Saturday evening along with the fund raising auction.

AMSAT-UK invite speakers, about amateur radio space and associated activities, for this event. They are also invited to submit papers for the "Proceedings" document which will be published at the same time but printed papers are not mandatory. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome "unpresented" papers for the Proceedings document.

FIRST CALL FOR SPEAKERS

This is the first call for speakers for the AMSAT-UK International Space Colloquium 2012 which, due to the Olympic & Paralympic Games, will be held this year on the weekend of September 15-16, 2012 at the Holiday Inn, Guildford, GU2 7XZ, United Kingdom.

This Colloquium will take place a few weeks before the planned launch of AMSAT-UK's FUNcube-1 satellite carrying a 435/145 MHz linear transponder for SSB/CW communications.

AMSAT-UK invites speakers, to cover topics about micro-satellites, CubeSats, Nanosats, space and associated activities, for this event.

They are also invited to submit papers for subsequent publishing on the AMSAT-UK web site. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome 'unpresented' papers for the web site.

We appreciate that it is not always possible to give a firm indication of attendance at this stage but expressions of interest would be appreciated.

Submissions should be sent *ONLY* to G4DPZ, via the following routes:

e-mail: david dot johnson at blackpepper dot co dot uk

Postal address at http://www.qrz.com/db/G4DPZ

AMSAT-UK also invite anyone with requests for Program Topics to submit them as soon as possible to G4DPZ. Invitations for any papers on specific subjects will be included in the future call. Likewise if anyone knows of a good speaker, please send contact and other information to G4DPZ.

[ANS thanks Dave Johnson, G4DPZ and AMSAT-UK for the above information]

New Satellite Group Formed in Cuba

Hector Martinez, CO6CBF reports that the Cuban Amateur Radio Federation (FRC) has created its first official Satellite Group.

Hector said that himself, Raydel CM2ESP, and Pavel CO7WT worked to form the group and made the request to the FRC headquarters. The request was approved on March 3, 2012. The official name is Grupo de Radioaficionados para Operaciones Satelitales (GROS).

The principal mission is to promote amateur radio by satellites in Cuba and motivate Cuban hams to operate on the satellites.

Grupo de Radioaficionados para Operaciones Satelitales is planning their first meeting in Havana City, Cuba.

[ANS thanks Hector Martinez, CO6CBF for the above information]

India VO-52 Satellite Recovery in Progress

Mani, VU2WMY, Secretary & Station-In-Charge at the Upagrah Amateur Radio Club VU2URC in India reported that on March 6 the ISRO Satellite Centre recovered operation and control of HAMSAT VO-52. This satellite had been heard during expected passes since February 28.

Mani wrote, "I can share at this moment is 'HAMSAT VO-52' is in 'Excellent Health' after recovery operations. Right now, it is under observation. The decision in regards to switching 'ON' the transponder is pending clearance from ISRO. This decision expected soon. The user community will be informed well in advance about the transponder switching."

ISRO Announces Plan to Turn on Dutch Transponder

On March 8, Mani, VU2WMY, reported that news had been received from Mr. T. Parimalarangan, HAMSAT VO-52 Operations Director at ISTRAC/ISRO that, "After 'In-Orbit Maintenance Operations' the decision to turn 'ON' Transponder No 2 i.e. The Dutch Transponder made by William Leijenaar PE1RAH on March 8 during orbit # 37006 over India."

Dutch Transponder Activation on Hold for One Week

Unfortunately, we are sorry to inform that the 'Expert Committee' overseeing the VO-52 (HAMSAT) performance has advised to extend the 'Observation Period' by an other week.

Hence, the decision to switch on the transponder # 2 is now put 'ON HOLD' till further notice. Inconvenience caused to the users is regretted.

This latest decision is just only a postponement and nothing to worry about the health of the spacecraft. We re-assure you all that VO-52 is very strong and in a 'Perfect Health' condition.

Once the Dutch transponder is switched on it will use the following frequencies:

Uplink frequency: 435.250 MHz
Downlink frequency: 145.900 MHz
Beacon: CW at 145.859330 MHz (145.86 MHz)
Output level of Beacon Carrier: 18 dBm

ISRO invites a 'Critical Comparative Signal Report' between the Indian and Dutch transponder would be of great help for further evaluations and necessary actions for the maintenance the transponder in good and healthy condition for better services and also, the inputs would be very valuable to the respective transponder designers. Please send your feedback to tprangan@istrac.org.

Summaries from stations monitoring for VO-52 can be entered and viewed on the Live OSCAR Satellite Status Page: http://oscar.dcarr.org/

[ANS thanks Mani, VU2WMY, Secretary & Station-In-Charge at the Upagrah Amateur Radio Club for the above information]

March 17 for AMSAT-LU Balloon Test Flight of LUSEX Satellite Systems

AMSAT-Argentina announced they are planning to test systems of the LU Satellite EXperiment (LUSEX) satellite during a high altitude balloon flight up to 100,000 feet. This is scheduled for March 17 at 1500 UTC. Direct reception of the balloon flight is estimated to extend to 400 miles from the City of Junin, west of Buenos Aires, Argentina. (See http://www.amsat.org.ar/junincubr.jpg for estimated coverage map.)

The payload will feature several radio and telemetry experiments:

+ Crossband FM Repeater
  Uplink   435.950 MHz FM (123 Hz tone)
  Downlink 145.950 MHz FM

+ SSTV Downlink 145.950 MHz FM
  ROBOT-36 in real time, showing the view from the balloon every
  5 minutes during ascent/descent, longer interval at high alti-
  tude. Video will also be recorded and recovered at the end of
  the flight.

+ APRS Data
  APRS 1200 baud packet on 144.930 MHz, and 145.950 MHz.

+ Telemetry Downlink 145.950 MHz
  If the crossband repeater is in use a warning bip at 40 seconds
  will indicate telemetry is coming, which is sent if the repeater
  is not in use. If the repeater continues to be busy then 2 bips
  will indicate APRS packets will be sent.

  CW telemetry (modulated FM on 145.950 MHz) will be sent every
  5 minutes with the following sequence: CQ LU7AA, sequence number,
  external and internal temperatures °C and battery voltage.

+ User Telecommand Experiment
  The 435.950 up / 145.950 down crossband repeater will accept user
  DTMF command to return a signal report. Sending B* on the uplink
  will return S5 (average signal strength) or P10 (S9+10 signal
  strength) modulated CW tones on the 145.950 MHz FM downlink.

APRS trajectory will update every minute, including speed, height, external and internal temperatures and 7.2v battery voltage. This can be monitored directly on 144.930 MHz for stations in range. It will also display at: http://aprs.fi/?call=lu7aa-11 . The APRS symbol will display as a balloon during ascent, and as a glider during parachute descent. The AMSAT-LU APRS Igate LU7AA-10 on 144.930 and 430.930 MHz will be active. Maps for UI-View APRS tracking can downloaded from http://www.amsat.org.ar.

Stations making a contact via the balloon payload may qualify for a certificate. See http://www.amsat.org.ar/certsat.html for details.

AMSAT-LU thanks the members of Radio Clubs of Junin, QRM Belgrano, APRS Group, Don Bosco Ramos Mejia School, gliders Clubs of Zarate, Junin and Ca=uelas, and the twelve Amsat-LU members development team. Reports from radio amateurs during previous flights are appreciated and they look forward to your reports during the March 17 flight.

Photos and reports of prior flights can be viewed on-line at: http://www.amsat.org.ar/lu4aao/experimento_globo_y_parapente.htm

The LU Satellite EXperiment web page is at: http://lusex.org.ar

[ANS thanks AMSAT-LU for the above information]

KB8VCO and W8ZCF ARISSat-1 SSTV Contact Featured in the Press

The Cincinnati (Ohio) Press web featured a story about the successful

SSTV contact via ARISSat-1 between Farrell Winder, W8ZCF and his son, Jeff Winder, KB8VCO.

The Winders teamed together and after many, many tries were successful in sending and receiving a picture of Farrell Winder's automobile license plate.

The Winders used two computers, two radios, and two rotatable outside antennas on towers to aim and to pinpoint the satellite antenna. Conditions were challenging as the satellite was traveling at 18,000 MPH at an altitude of 225 miles, which provided a window of opportunity of only up to about nine minutes while its footprint was passing within range of Cincinnati.

The successful end result was a lot of hard-earned fun and excitement to work with very small signals from "outer space" and overcome the setback caused by the missing antenna on ARISSat-1.

The picture the Winders sent and received is apparently one of the only complete pictures sent and received. Two other operators tried a similar undertaking, but received just portions of pictures.

Since ARISSat-1 had no propulsion system to sustain altitude it entered the Earth's atmosphere on Jan. 4, 2012 and disintegrated.

The story can be read on-line at:
http://tinyurl.com/ARISSat-Cincinnati

[ANS thanks Farrell Winder, W8ZCF and Jeff Winder, KB8VCO for the above information]

Echolink Satellite Nets Launched

New Echolink SAT-CHAT Net

Vince Waelti, K9TSU has established a new, open net, the "Sat-Chat" on the *AMSAT* server on EchoLink. This net meets at 1900 Central US Time (UTC-5) every Saturday evening. Everyone is invited to check in. Also links to -L and -R systems for on-air repeater coverage are welcome. Vince can be reached at k9tsu(at)hotmail(dot)com if you have any questions.

Hudson Valley SatCom Net on Echolink

Stu Ballinger, WA2BSS says the next Hudson Valley SatCom net will meet on-air (146.97 MHz. Mt. Beacon Repeater) and on the Echolink node N2EYH-L on March 15 at 2000 Eastern US time (UTC-4).

Houston AMSAT Net on Echolink

The Houston AMSAT Net meets on the Echolink *AMSAT* server every Tuesday evening at 2000 Central US Time (UTC-5). Checkin to the net is taken via Echolink if you are not in radio range of Houston.

[ANS thanks Vince Waelti, K9TSU; Stu Ballinger, WA2BSS; and Bruce Paige, KK5DO for the above information]

Satellite Shorts From All Over

+ Watch the CQ Magazine Newsroom (http://www.cqnewsroom.blogspot.com/) for more coverage of amateur radio in space. Recent coverage on CQ's Newsroom blog included:
  NASA to Launch Fox-1 Cubesat
  http://tinyurl.com/CQBlog-Fox (cqnewsroom.blogspot.com)
  Vega Rocket Launches Nine Satellites
  http://tinyurl.com/CQBlog-Vega (cqnewsroom.blogspot.com)

+ Watch AMSAT's Lou McFadin, W5DID interview on HamRadioNow by Gary Pearce, KN4AQ on Southgate ARC's web: http://tinyurl.com/LouMcFadin Lou describes the features of the ARISSat-1 satellite, using the operational model at the AMSAT booth at the Orlando HamCation.

+ Paul, 2E1EUB says his next mobile satellite operations as 2M1EUB from his van will be starting March 24 for 7 days from the east coast of Scotland. Main operations are planned for AO-7 Mode A/B and other satellites as available. Paul will post his latest information on amsat-bb and also on the lookup at QRZ.com for 2M1EUB.

+ This is a reminder to consider making your donation to help AMSAT-UK build the FUNcube Project, an amateur radio satellite that features a 435 to 145 MHz Linear Transponder for SSB/CW operation. the Virgin Giving charity donation website http://tinyurl.com/funcubegiving/ A donation link is also at http://www.uk.amsat.org/.

+ DQ0STRATEX is a special event call on the occasion of the stratospheric balloon project (StratexB) planned for March 2012 by the local DARC clubs Duelmen (N28) and Luedinghausen (N29). They plan to fly an amateur radio load, consisting of an APRS beacon operating on 144.800 MHz and a FM speech beacon operating on 430.375 MHz to the stratosphere on March 24 around 1600 UTC from the airport at Borkenberge near Luedinghausen. Hams from the German Aerospace Center (DLR) in Bremen will also fly an experimental ADS-B receiver. DQ0STRATEX plans to be active on all bands and all modes between now and January 31, 2013.

+ If you ever wondered if the astronauts on the ISS could see you shining a light at them you'll get your answer here. On March 4, about 65 amateur astronomers were in position at the Lazano Observatory in Springbranch Texas (near San Antonio). They turned on searchlights and waited as the ISS was set to make an appearance in the sky. Astronaut Don Pettit, KD5MDT had no trouble seeing the flashes. Watch the video at: http://tinyurl.com/ISS-Flash (UniverseToday.com)

+ NASA invites you watch the 2012 Exploring Space Lectures held at the National Air and Space Museum in Washington, D.C. live on the web:

  Big Bang for the Buck: Cosmology from WMAP
  March 22, 2012, at 8 p.m. EDT (UTC-4)
  http://www.nasm.si.edu/events/eventDetail.cfm?eventID725.

  The Little Satellite That Could
  April 11, 2012, at 8 p.m. EDT (UTC-4)
  http://www.nasm.si.edu/events/eventDetail.cfm?eventID726.

  Gamma Ray Bursts and the Birth of Black Holes
  May 16, 2012, at 8 p.m. EDT (UTC-4)
  http://www.nasm.si.edu/events/eventDetail.cfm?eventID727.

Seeking Planets Like Earth
June 5, 2012, at 8 p.m. EDT (UTC-4)
http://www.nasm.si.edu/events/eventDetail.cfm?eventID728.

+ NASA announces the release of the ISSLive! app for iPhone, iPad and Andoid. This innovative, interactive app provides a novel way to learn about the International Space Station while on the go.

The ISS Live! app delivers live streaming data from the International Space Station. Users can take a virtual 3-D tour of the Mission Control Center and the space station, and view mission control console displays with real-time data. Interactive educational lessons using the data, as well as crew and science timelines with individual crew member, social media and international science experiment details are also available via the app.

To learn more and find links to download the ISSLive! app, visit http://spacestationlive.jsc.nasa.gov where you will find the icons for the iPhone App Store and the Android Market. (iPad and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries. Android is a registered trademark of Google Inc.
- NASA Education Express Message -- March 8, 2012

+ Here is an interesting video with the caption, "Is this the best video footage ever of photos taken from the International Space Station? ISS astronaut and Expedition 29 commander Mike Fossum seems to think so." Fly over the earth at: http://www.universetoday.com/93828/the-best-iss-video-ever-you-decide/ The video is a series of time lapse photos of Earth at night as seen from the ISS.

+ The 16th Annual SVHFS Conference will be held in Charlotte, North Carolina April 20-21. In addition to the technical activities the conference will feature a keynote address by ARRL President, Kay Craigie, N3KN at lunch on Saturday. The banquet speaker will be 1993 Nobel Prize in Physics laureate Dr. Joe Taylor, K1JT. See http://www.svhfs.org/ for more details and to register.

+ March 13-22 marks the next GLOBE at Night sky survey for students and citizen scientists. Information how to participate, sky charts, and software applications can be found at: http://www.globeatnight.org.

+ Although the New Space Fence radar is still 5 years away from full operation Lockheed Martin has posted a cool video of the prototype at http://tinyurl.com/SpaceFence (youtube). UniverseToday has posted an article with more details and associated links at: http://tinyurl.com/UniverseTodayRadar (UniverseToday.com).

+ Check out the article written by a teenage ham, "How to Work the Amateur FM Satellites" by Vince Waelti, K9TSU, posted at: http://www.eham.net/articles/27718. Congratulations Vince on your publication.

[ANS thanks everyone for the above information]

Amateur Radio on the International Space Station (ARISS) Status Report
March 5, 2012

1.School Contacts

Dilworth Elementary School in San Jose, California had an Amateur Radio on the International Space Station (ARISS) contact on Monday, March 5 at 18:33 UTC. The ARISS contact is part of a comprehensive education plan which will pique students' interest in Science Technology, Engineering and Math (STEM).

An Amateur Radio on the International Space Station (ARISS) contact was held with ESA ESTEC in Noordwijk, Netherlands on Tuesday, March 6 at 13:11 UTC via station ON4ISS in Belgium. The radio activity is part of an educational program around Andr Kuipers' mission Spaceship

Earth which targets children who are 10-14 years of age. Part of this program consists of mission assignments Kuipers gives to Dutch school children. The winners of each challenge will be invited to the radio contact. Other activities include lessons and experiments.

2. ESA Awards ARISS Contact to Winners of Competition

Students from three schools, the American School of the Hague, the International School of Amsterdam and the British School in the Netherlands, took part in an Amateur Radio on the International Space Station (ARISS) contact on Monday, February 27 via station IK1SLD in Italy.

This ARISS contact with astronaut Andr Kuipers was offered as a prize

by the European Space Agency (ESA) to those schools who submitted the best suggestions for experiments or demonstrations that could be performed in microgravity on board the ISS using common everyday items. The youth were given lessons on radio signals and communications which involved local radio ham experts.

3. Atlanta, Georgia Youth Radio ISS Astronaut

On Friday, March 2, an Amateur Radio on the International Space Station (ARISS) contact was held between astronaut Don Pettit, KD5MDT on the ISS and Parkside Elementary School in Atlanta, Georgia. The radio link was provided by station K6DUE in Greenbelt, Maryland. Questions were asked concerning the education and training needed to become an astronaut and about how space affects one's appetite and sleep. The contact was part of a comprehensive education plan using NASA related activities to pique students' interest in Science, Technology, Engineering and Math (STEM). Audio was carried live on the NASA TV hour. East Atlanta Patch posted an article on the contact. http://eastatlanta.patch.com/articles/parkside-elementary-to-international-space-station-over#video-9240102

4. Pettit Chats with Greek Students via ARISS

Students attending the 5th Geniko Lykeio Katerinis in Katerini, Greece experienced a successful Amateur Radio on the International Space Station (ARISS) contact on Friday, March 2. The youth spoke with Don Pettit about the experiments onboard the ISS and asked how he communicates with his family during his mission. The contact complemented lessons covering astronomy and amateur radio with special attention given to the ISS regarding its role in humanity and science, its orbit and the every day life of the astronaut. ISS courses were based on ESA's education tool "ISS Education Kit." Five hundred were in attendance and another hundred connected to the internet to view the streaming video. Media coverage included two television stations.

5. Amateur Radio Newsline Covers ARISS

On March 2, Amateur Radio Newsline report #1803 carried an article

about the recent ARISS contact held during the John Glenn Event in Perth, Australia. The event celebrated the 50th anniversary of John Glenn's orbit of the Earth, when the population of Perth turned on its lights and Glenn observed the city was visible from space, leading to Perth's nickname, "City of Lights." To view, "Ham Radio in Space: Amateur Radio Celebrates John Glenn over Perth Australia," see: http://www.arnewsline.org/storage/scripts/nsln1803.txt

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

And, with that please keep in mind that the Sun accounts for 99.8% of the Solar System's mass. 1,300,000 Earths could fit inside of the Sun. Jupiter is as big as the Sun's core. 1,300 Earth's could fit inside of Jupiter.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM